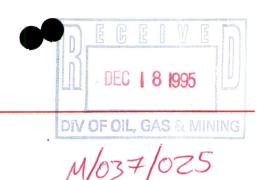


# **Umetco Minerals Corporation**

## **Exploration & Mining Departments**





December 12, 1995

Anthony A. Gallegos Department of Natural Resources 355 West North Temple 3 Triad Center, Suite 350 Salt Lake City, Utah 84180-1204

Re: Reclamation - M/037/25 (Deremo - Peterson Mine), M/037/023 (Calliham Mine) and M/037/027 (Wilson - Silverbell Mines)

Dear Mr. Gallegos:

We would like to start reclamation of the vent holes, portals, shafts and access roads on Deremo -Peterson, Wilson - Silverbell and Calliham Mines.

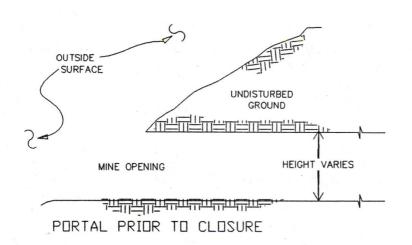
Enclosed you will find drawings and procedures we use for portals, unlined vent holes, wood lined shafts, concrete lined shafts, lined vent holes, and steel lined shafts closures. Also there is drawing of erosion prevention of waste piles and monument construction plan for capped vent holes, shafts and portals.

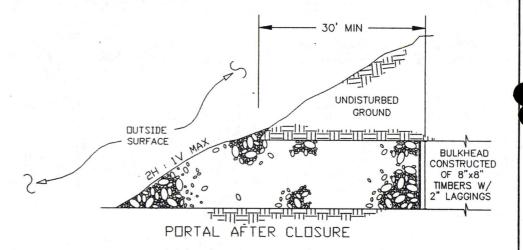
If you have any questions or need additional information, please call me at 1-970-677-2711.

Sincerely,

R. F. Barnett

Superintendent of Mine Rec.



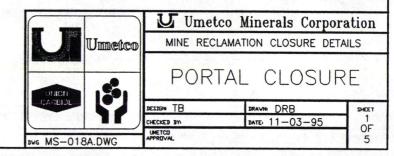


#### Closure Procedure

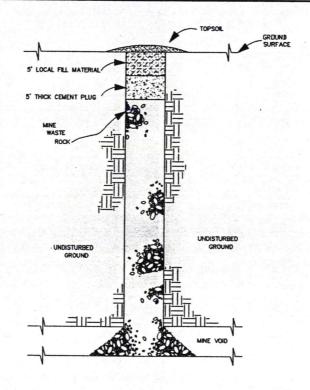
- Remove loose rock and earth, air lines, water lines, electrical lines, sets, and any other improvements from the surface to 30 feet into the mine opening.
- 2. If the portal is a decline, construct a bulkhead utilizing 8" x 8" timbers and 2" lagging. The purpose of the bulkhead is to allow the placement of fill material close to the back or roof. The bulkhead should be located at least 30 feet inside the portal, and strong enough to allow the placement of the fill material.
- Fill the mine opening with mine waste rock or other fill material. Compact the material to the original contours, or to a maximum slope of 1 vertical to 2 horizontal.
- 4. Cover the work area with topsoil if it is available. Revegetate in accordance to the Revegetation Procedure. Construct a monument in accordance to the Monument Construction Procedure.

## NOTES:

- Construction specifications shall be conducted in accordance to the Umetco Minerals Corporation Safety Manual, and the Union Carbide Corporation Responsible Care Standards.
- Unforseen field conditions will likely be encountered requiring modifications to limits and/or locations of design details.



SCALE NOT TO SCALE



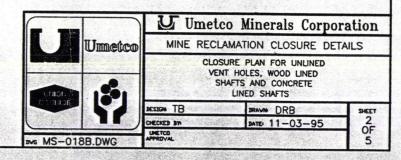
#### Closure Procedure

- Remove surface improvements. Remove and stockpile any available top soil from the work area.
- Remove the concrete pad at the vent hole collar. Break the concrete pad into pieces smaller than the vent hole diameter and dump the pieces into the vent hole.
- Fill the vent hole with mine waste rock or other fill material to within 10 feet of the surface.
- Let the mine waste rock in the vent hole settle for at least 3 weeks.
- 5. Pour a 5-foot thick, 5-bag mix concrete cap into the vent hole.
- Fill the remaining 5 feet of the vent hole with local fill material. Mound up the surface above the vent hole with topsoil. Revegetate in accordance to the Revegetation Procedure.

## NOTES:

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- Unforseen field conditions will likely be encountered requiring modifications to limits and/or locations of design details.

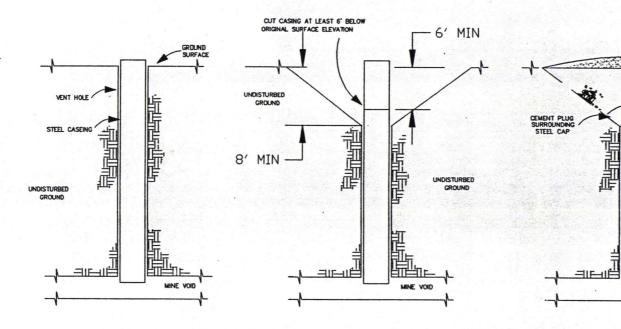
SCALE: NOT TO SCALE





#### DURING CLOSURE

#### AFTER CLOSURE



#### Closure Procedure

- Remove surface improvements. Remove and stockpile any available top soil or other suitable growth media from the work area to respread after closure.
- Excavate around the casing to a depth of 8 feet or until hard rock is encountered. Precautions should be made to insure the ground is stable.
- Cut off the casing at least 6 feet below the original surface elevation.
  Cap the casing by welding an iron plate to the end.
- Pour at least 1 yard of 5 bag mix concrete onto the casing cap area.
  Fill the excavated area with random fill or top soil.
- 5. Mound up the surface above the vent hole with topsoil. Revegetate in accordance to the Revegetation Procedure.
- 6. Construct a monument in accordance to the Monument Construction Procedure.

## NOTES:

 Construction specifications shall be conducted in accordance to the Umetco Minerals Corporation Safety Manual, and the Union Carbide Corporation Responsible Care Standards.

MINE VOID

RANDOM FILL OR TOPSOIL

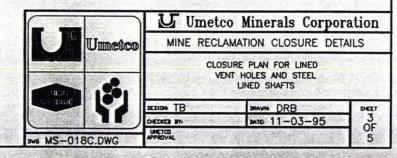
STEEL CAP WELDED TO TOP OF CASING

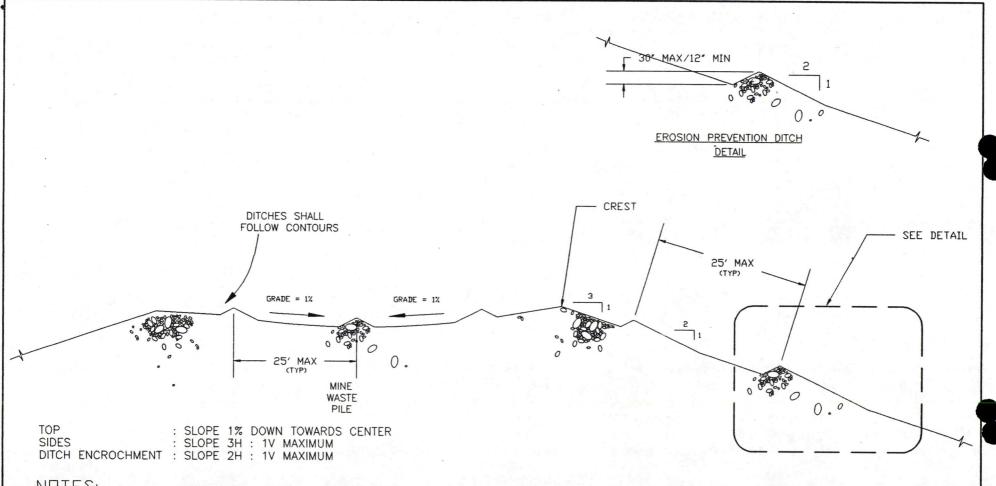
UNDISTURBED

GROUND

 Unforseen field conditions will likely be encountered requiring modifications to limits and/or locations of design details.

SCALE: NOT TO SCALE





### NOTES:

- Construction specifications shall be conducted in accordance to the Umetco Minerals Corporation Safety Manual, and the Union Carbide Corporation Responsible Care Standards.
- 2. Unforseen field conditions will likely be encountered requiring modifications to limits and/or locations of design details.
- 3. Erosion prevention ditches shall be constructed at least 10 feet from the base of the mine waste pile.



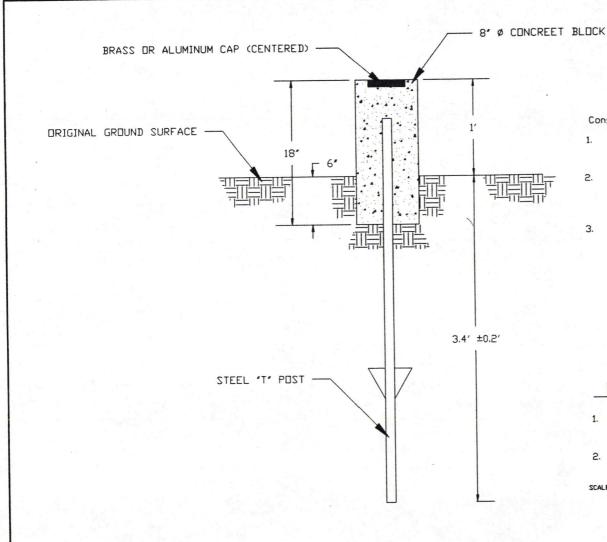
DWG MS-018D.DWG

Umetco Minerals Corporation MINE RECLAMATION CLOSURE DETAILS

EROSION PREVENTION DITCH CONSTRUCTION PLAN

DESIGN TB DRAVA DRB SHEET 4 OF CHECKED BY DATE: 11-03-95 UMETCO APPROVAL

SCALE: NOT TO SCALE



#### Construction Procedure

- To anchor the concrete block a steel "T" fence post 4 feet in length shall be driven into undisturbed ground or recompacted soils to a depth of 3.4 feet, with a tolerance of ±0.2 feet.
- A concrete block shall be formed and poured around the steel 'T' fence post. The dimensions for this block shall be 8 inches in diameter and 18 inches in height. The block shall be seated in the ground 6 inches.
- Prior to the concrete setting, a brass or aluminum cap shall be placed in the top center of the block. The cap shall contain the following:

Umetco Minerals Corp. Date of closure Name of opening B.L.M. case number

## NOTES:

- Construction specifications shall be conducted in accordance to the Unetco Minerals Corporation Safety Manual, and the Union Carbide Corporation Responsible Care Standards.
- Unforseen field conditions will likely be encountered requiring modifications to limits and/or locations of design details.

#### SCALE: NOT TO SCALE



5 OF DATE 11-03-95 CHECKED BY MS-018E.DWG

TEET